## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) A proton exchange fuel cell, comprising:

a separator which comprises

a separator substrate; and

a multi-coating layer formed on said separator substrate;

wherein said multi-coating layer comprises a peeling resistance layer provided on said separator substrate, a corrosion resistance layer provided on said peeling resistance layer, and a low electric resistance layer provided on said corrosion resistance layer;

wherein a material of said low electric resistance layer has an electric resistance of equal to or lower than 1000 $\mu\ \Omega cm^2$;

wherein said separator substrate comprises one kind or a composite material of two or more kinds of materials selected from the group consisting of stainless steel, copper, an alloy of copper, aluminum, an alloy of aluminum, titanium and an alloy of titanium;

wherein said multi-coating layer comprises one kind or a composite material of two or more kinds of materials having a low contact resistance selected from the group consisting of Ni, Fe, Co, B, Pb, Cr, Cu, Ti, Bi, Sn, W, P, Mo, Ag, Pt, Au, TiC, NbC, TiCN, TiN, CrN, $TiB_2$, $ZrB_2$, $Fe_2B$, and $Si_3N_4$;

wherein a film thickness of said corrosion resistance layer is 0.1 $\mu$m or more.

2. (Canceled)

3. (Previously Presented) The proton exchange fuel cell according to claim 1, wherein said multi-coating layer comprises a peeling resistance and corrosion resistance layer

made as one layer by combining said peeling resistance layer and said corrosion resistance layer provided on said separator substrate, and said low electric resistance layer provided on said peeling resistance and corrosion resistance layer.

4. (Canceled)

5. (Canceled)

6. (Withdrawn) A method of manufacturing a proton exchange fuel cell, comprising:

preparing a separator substrate; and

forming a multi-coating layer on said separator substrate by a process, capable of forming a thin film, selected from the group consisting of a physical evaporation process, a chemical evaporation process, a nitride treating process, a boride treating process, a carbonizing process, a plating process and a spraying process.

7. (Withdrawn) The method according to claim 6, wherein said forming of said multi-coating layer comprises:

forming a peeling resistance layer on said separator substrate;

forming a corrosion resistance layer on said peeling resistance layer; and

forming a low electric resistance layer on said corrosion resistance layer.

8. (Withdrawn) The method according to claim 7, wherein in said step of forming said multi-coating layer, said multi-coating layer is formed using said plating process such that a film thickness of said low electric resistance layer is 0.02 $\mu$m or more, a film thickness

of said corrosion resistance layer is 0.1 $\mu$m or more, and a film thickness of said peeling resistance layer is 0.1 $\mu$m or more.

9. (Withdrawn) The method according to claim 7, wherein in said step of forming said multi-coating layer, said multi-coating layer is formed using said physical evaporation plating process such that the film thickness of said low electric resistance layer is 1.0 $\mu$m or more, the film thickness of said corrosion resistance layer is 1.0 $\mu$m or more, and the film thickness of said peeling resistance layer is 1.0 $\mu$m or more.

10. (Withdrawn) The method according to claim 9, wherein a crystal orientation of each layer of said multi-coating layer is oriented to a direction of a Miller index of (200) or (002).

11. (Withdrawn) The method according to claim 9, wherein a porosity in said multi-coating layer is 5 x 10°% or less in terms of defective area rate.

12. (Withdrawn) The method according to claim 6,

wherein a material for said multi-coating layer formed on said separator substrate comprises one kind or a composite alloy material of two or more kinds of materials having a lower electric resistance than that of said separator substrate of metallic material, ceramics material and cermet material.

13. (Withdrawn) The method according to claim 6, further comprising:

electrically, mechanically or chemically removing a passive state film or an oxide existing on said separator substrate before said forming of said multi-coating layer.

14. (Withdrawn) A method of manufacturing a separator of a proton exchange fuel cell, comprising:

preparing a separator substrate; and

forming a multi-coating layer on said separator substrate by a process, capable of forming a thin film, selected from the group consisting of a physical evaporation process, a chemical evaporation process, a nitride treating process, a boride treating process, a carbonizing process, a plating process and a spraying process;

removing said multi-coating layer electrically, mechanically or chemically, so that said multi-coating layer and said separator substrate are individually recovered; and

reusing material of said recovered multi-coating layer in manufacturing of said-proton exchange fuel cell.

15. (Withdrawn) The method according to claim 14, further comprising:

after recovering said separator substrate, pulverizing and resolving said recovered separator substrate electrically, mechanically or chemically; and

reusing material of said recovered separator substrate in manufacturing of said proton exchange fuel cell.

16. (Previously Presented) A proton exchange fuel cell prepared by the method according to one of claims 6 or 14.

17. (Previously Presented) The proton exchange fuel cell according to Claim 1, wherein said peeling resistance layer consists of Ni.

18. (Previously Presented) The proton exchange fuel cell according to Claim 1, wherein a crystal orientation of each layer of said multi-coating layer is oriented to a direction of a Miller index of (200) or (002).

19. (New) A proton exchange fuel cell, comprising:

a separator which comprises

a separator substrate; and

a multi-coating layer formed on said separator substrate;

wherein said multi-coating layer comprises a peeling resistance layer provided on said separator substrate, a corrosion resistance layer provided on said peeling resistance layer, and a low electric resistance layer provided on said corrosion resistance layer;

wherein a material of said low electric resistance layer has an electric resistance of equal to or lower than 1000 $\mu\ \Omega cm^2$;

wherein said separator substrate comprises one kind or a composite material of two or more kinds of materials selected from the group consisting of stainless steel, copper, an alloy of copper, aluminum, an alloy of aluminum, titanium and an alloy of titanium;

wherein said multi-coating layer comprises one kind or a composite material of two or more kinds of materials having a low contact resistance selected from the group consisting of Ni, Fe, Co, B, Pb, Cr, Cu, Ti, Bi, Sn, W, P, Mo, Ag, Pt, Au, TiC, NbC, TiCN, TiN, CrN, $TiB_2$, $ZrB_2$, $Fe_2B$, and $Si_3N_4$;

wherein a film thickness of said low electric resistance layer is 0.02 $\mu$m or more, a film thickness of said corrosion resistance layer is 0.1 $\mu$m or more, and a film thickness of said peeling resistance layer is 0.1 $\mu$m or more.

20. (New) The proton exchange fuel cell according to claim 1, wherein the film thickness of said low electric resistance layer is 1.0 $\mu$m or more, the film thickness of said corrosion resistance layer is 1.0 $\mu$m or more, and the film thickness of said peeling resistance layer is 1.0 $\mu$m or more.

## BASIS FOR THE AMENDMENT

Claim 1 has been amended as supported at page 16, second full paragraph of the specification.

New Claims 19 and 20 have been added as supported at page 16, second full paragraph to page 17, line 7 of the specification.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1, 3 and 6-20 will now be active in this application. Claims 6-15 stand withdrawn from further consideration.

## INTERVIEW SUMMARY

Applicants wish to thank Examiner Mercado for the helpful and courteous discussion with Applicants' Representative on August 24, 2004. During this discussion it was noted that that there is no disclosure or suggestion of the claimed layer thickness of the corrosion resistance layer in Li et al (col. 3, lines 51-56).

Applicants also requested rejoinder of non-elected Claims 6-15 once the elected claims are allowable. The Examiner is respectfully invited to call Applicants' Representative if amendments to the non-elected claims are necessary.